

## TROPICAL DISTURBANCES DURING THE HURRICANE SEASON OF 1924

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During the hurricane season of 1924, there were eight disturbances near or within the Tropics, which were potentially dangerous or actually reached hurricane intensity. Three of these caused full hurricane velocities over some portions of their paths, two gave strong gales to near hurricane winds, and the remaining three failed to develop more than moderate intensity.

The first disturbance, which was followed from the 18th to the 20th of June from the northwestern Caribbean to the southwestern Gulf of Mexico, caused heavy rains but apparently no high winds.

Following this disturbance, nothing of importance was noted until August 17, when a disturbance of slight intensity appeared over the Lesser Antilles. It moved northwest, reaching the Virgin Islands on the 19th without any increase in intensity. It was accompanied by heavy rain but no damaging winds. It was next noted as it turned the winds around at Turks Island, the storm passing to the north of the station. By the 21st, however, there had been considerable development, one vessel reporting a wind force of 11 (Beaufort) and 29.52 inches on the barometer. Up to this time the course of the storm had been toward the northwest, but an obstructing high-pressure area now deflected it toward the west-southwest and it did not start north again until the night of the 24th, meanwhile developing the greatest intensity just north of the Bahamas with hurricane velocities and barometer readings as low as 28.70 inches. On the 25th the storm began to move very rapidly north-northeast and at noon was very accurately located by three vessels near latitude 32° N. and longitude 76° 30' W., the ships reporting barometer readings of from 28.76 to 28.80 inches. At 8 p. m. it was just southeast of Hatteras, a vessel reporting 28.67 inches. It reached Nantucket shortly after noon of the 26th and was last noted near Port Aux Basques, Newfoundland, the next morning. The path of this storm was quite unusual and shows the effect of the extratropical circulation upon the movement of these storms. After the storm was well out of the Tropics the heaviest winds were experienced on the southeast quadrant (on the side toward the HIGH), and little damage resulted to the west, except near the storm center.

This hurricane had barely receded from the limits of observation before a new one, already of maximum intensity though small diameter, made its appearance between Antigua and Guadeloupe of the Lesser Antilles on the night of the 27th of August. The center passed over Cudjoc Head, Montserrat at 3.30 a. m. of the 28th with readings on nearby barometers as low as 28.50 inches. The center was again exactly located as it passed over the western end of Tortola of the Virgin group. The lowest reading at this point was 28.56 inches at 1.30 a. m. of the 29th. From this time until the storm reached Newfoundland on the 4th of September it was encountered by various vessels, but none reported the extreme conditions of wind and low barometer which were recorded over the Lesser Antilles.

The islands in the direct path of the center of the hurricane were almost completely devastated by wind and by flood waters from the extremely heavy rainfall.

On the morning of the 13th of September a disturbance was noted in the central portion of the Gulf of Mexico. This developed and moved, at first, slowly northwest, but was caught in a passing trough of low pressure and turned sharply toward the northeast, striking the northwest Florida coast near Appalachicola on the 15th and moved thence up the Atlantic coast with diminished intensity. Near hurricane velocities were recorded here and reported from the vicinity, but little damage resulted. Like the preceding storm the area covered was quite small but the intensity was much less on account of the higher minimum reading of the barometer near the center (29.12).

The next disturbance was noted on the morning of the 27th of September in the vicinity of the Swan Islands. It had a well-defined circulation, but did not develop the central core of low barometer which was so well shown in the two preceding storms. Consequently dangerous winds were absent. It reached the Florida coast near Cedar Keys during the afternoon of the 29th and continued up the Atlantic coast as a storm of only moderate intensity.

On the 12th of October a well-defined disturbance developed over the north-central Gulf of Mexico, but was forced southwestward and apparently dissipated over the southwestern Gulf on the 14th.

At the same time the air pressure began to fall in the vicinity of the Swan Islands. This new disturbance remained nearly stationary until about the 18th by unfavorable pressure distribution to the northward, but meanwhile it had developed greatly in intensity with a central pressure below 28 inches and hurricane winds. It began to move northward on the 18th and passed over the extreme western end of Cuba on the 19th, Los Arroyas reporting a pressure of 27.52 inches and the S. S. *Toledo* near Jutias Cay (northwest coast) 27.22 inches. The storm struck the Florida coast in the unsettled region south of Punta Rassa and quickly diminished in intensity, passing off into the Atlantic just north of Miami. The southward movement of a great HIGH caused the path of the storm to be deflected quite sharply to the eastward and apparently aided in its disintegration. Almost complete destruction was wrought over extreme western Cuba in the path of minimum barometer.

On the 8th of November a definite cyclonic circulation was noted over Jamaica, which moved slowly north across eastern Cuba on the 9th accompanied by gales. It then turned toward the northeast and was encountered by the U. S. S. *Concord* in the southeastern Bahamas as a storm of considerable intensity. It continued in a northeasterly direction, passing just southeast of Bermuda on the 13th and was last noted south of the Grand Banks on the 15th. (See Chart XV at end of this REVIEW.)